

Remarks/Arguments:

Claims 1, 2 and 4-7 are pending and rejected in the application. Claims 1, 6 and 7 have been amended. No new matter has been added.

On page 3, the Official Action rejects claims 1 and 4-7 under 35 U.S.C. § 103(a) as being unpatentable over Radimirsch (U.S. 6,212,202) in view of Haartsen (U.S. 2009/0122775) and further in view of Alastalo (U.S. 2004/0066762). On page 11, the Official Action rejects claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Radimirsch in view of Haartsen, in view of Alastalo, and further in view of Koval (U.S. 2004/0109497). It is respectfully submitted, however, that the claims are patentable over the art of record for at least the reasons set forth below.

Applicants' invention, as recited by claim 1, includes features which are neither disclosed nor suggested by the art of record, namely:

... a third radio communication device ... receives in the second channel :

a) the communication time reservation request information from the first radio communication device, and stores the time slot written in the communication time reservation request information as a transmission prohibition time slot, together with an identifier of the first radio communication device and an identifier of the second radio communication device in a communication prohibition table, and

b) the communication time reservation response information from the second radio communication device,

if the time slot and identifiers are not already stored in the communication prohibition table, the third radio communication device stores the time slot written in the communication time reservation response information as the transmission prohibition time slot, together with the identifier of the first radio communication device and the identifier of the second radio communication device in the communication prohibition table, and

if the time slot and identifiers are already stored in the communication prohibition table, the third radio communication device does not store the time slot and identifiers included in the communication time reservation response information ... (Emphasis Added)

Claim 1 relates to a third radio communication device which receives reservation request information (RTS) and reservation response information (CTS) from other communication devices. Upon receiving either the RTS or CTS, the third radio communication device stores the time slot and identifiers of the other devices in a prohibition table. Specifically, if the time slot and identifiers are not in the prohibition table, then they are stored. If the time slot and identifiers are already stored in the communication prohibition table, however, they are not stored a second time (device avoids duplicate registration). Support for these features can be at least found in paragraphs 88 and 89 of Applicants' specification. No new matter has been added.

On page 5, line 16 to page 6, line 10, the Examiner cites paragraphs 51 and 52 of Alastalo, where a communication node determines its transmission time slot based on information received from other communication nodes (*"node 1 may base the decisions regarding the timeslots for its active links when information it has received from the other nodes about their forthcoming transmissions during the early control channel timeslots to avoid collisions. In order to enable the scheduling operations the nodes are adapted to interpret the received control channel information to decide in which timeslot they can perform their transmissions and in which timeslots they should be prepared to receive"*). Thus, the Examiner is interpreting the information about the transmission of the other communication nodes as Applicants' third radio communication device receiving the RTS and CTS from the other devices. Alastalo, however, does not suggest a third radio communication device which stores time slots and identifiers of other devices. Furthermore, Alastalo does not suggest a feature wherein the timeslot and identifiers are not stored a second time (duplicate registration) because they are already stored in the prohibition table.

Applicants' claim 1 is different than the art of record, because the timeslots and identifiers of communication devices are stored in the prohibition table if they are not already stored, and are not stored in the prohibition table if they already exist in the prohibition table (*"... a) the communication time reservation request information from the first radio communication device, and stores the time slot written in the communication time reservation*

request information as a transmission prohibition time slot, together with an identifier of the first radio communication device and an identifier of the second radio communication device in a communication prohibition table, and b) the communication time reservation response information from the second radio communication device, if the time slot and identifiers are not already stored in the communication prohibition table, the third radio communication device stores the time slot written in the communication time reservation response information as the transmission prohibition time slot, together with the identifier of the first radio communication device and the identifier of the second radio communication device in the communication prohibition table, and if the time slot and identifiers are already stored in the communication prohibition table, the third radio communication device does not store the time slot and identifiers included in the communication time reservation response information; and ... (Emphasis Added)".

In one example, as shown in FIG. 1, if devices 103 and 104 wish to communicate with each other, they send communication reservation request information (CTS) and reservation response information (RTS) to each other. Thus, device 103 may send an RTS message requesting a specific transmission slot to device 104. Device 104 may then respond with a CTS message confirming that timeslot. Although device 102 is not involved in the communication between devices 103 and 104, it is within radio range, and therefore receives both the RTS and CTS messages. In this example, device 102 could be considered the third radio communication device as recited in claim 1. Upon receiving the RTS message, third communication device 102 stores the time slot and the identifiers of devices 103 and 104 in the communication prohibition table. Upon receiving the CTS message transmitted from communication device 104, the third radio communication device 102 checks if the time slot and identifiers are already stored in the prohibition table. If they are already stored (stored based on the RTS message), they are not stored again (duplicate registration is avoided). Thus, if device 102 registers the time slot and identifiers when receiving the RTS message from device 103, it will not register the same timeslot and identifiers when receiving the CTS message from device 104.

This feature is at least supported in paragraphs 88 and 89 of Applicants' specification ("radio communication device 103 transmits an RTS signal ... to make communication with the radio communication device 104 ... radio communication device 102 is in the area 113 so it receives the RTS signal ... at this time the radio communication device 102 registers the RTS signal in the communication prohibition table ... the source station ID MAC address of the received RTS signal 701 is recorded in the source ID 801 ... occupied timeslot 308 of the RTS

signal 701 is recorded ... next, a CTS signal 702 is sent from the radio communication device 104 toward the radio communication device 103 ... radio communication device 102 is also located in area 114, so it also receives a CTS signal ... radio communication device 102 tries to register the signal in the communication prohibition table ... but it was registered when it received the RTS signal 701, so the registration is not performed again").

Radimirsch is relied on for communicating through both a broad-band channel and a narrow-band channel. Haartsen is relied upon for teaching an ad-hoc network which can communicate over at least a first and second channel. Neither Radimirsch nor Haartsen, however, make up for the deficiencies of Alastalo. Accordingly, for the reasons set forth above, claim 1 is patentable over the art of record. Withdrawal of the rejection and allowance of the claim is respectfully requested.

Claims 6 and 7 have similar features to claim 1. Thus, independent claims 6 and 7 are also patentable over the art of record for at least the reasons set forth above.

Dependent claims 4 and 5 include all of the features of the claims from which they depend. Thus, claims 4 and 5 are also patentable over the art of record for at least the reasons set forth above.

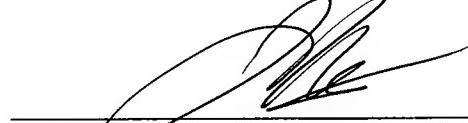
Koval is relied on for teaching a narrow-band transmission channel whose modulation and demodulation rates are set to be at a predetermined value. Koval, however, does not make up for the deficiencies of Alastalo, Haartsen and Radimirsch. Thus, dependent claim 2 is also patentable over the art of record at least due to its dependency on claim 1.

Appln. No.: 10/573,506
Amendment Dated February 5, 2010
Reply to Office Action of December 8, 2009

MAT-8833US

In view of the amendments and arguments set forth above, the above-identified application is in condition for allowance which action is respectfully requested.

Respectfully submitted,



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Dated: February 5, 2010

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SH_595864